

TABLE 20. Full-time graduate students in science, engineering, and health in doctorate-granting institutions, by field and primary mechanism of support: 2005–11

Field and primary mechanism of support	2005	2006	2007old <sup>a</sup>	2007new <sup>a</sup>	2008	2009	2010	2011
All surveyed fields	381,198	393,138	403,722	409,421	422,287	428,856	433,252	430,623
Fellowships	36,026	36,332	37,862	38,149	38,363	38,769	39,719	41,146
Research assistantships	112,367	112,825	113,253	114,067	116,310	119,393	121,525	120,267
Teaching assistantships	72,479	74,204	76,038	78,080	81,399	80,028	81,154	82,114
Traineeships	14,217	14,277	13,123	13,180	12,975	12,693	12,263	12,423
Other types of support	146,109	155,500	163,446	165,945	173,240	177,973	178,591	174,673
Self-support	121,226	127,741	134,541	136,738	145,620	149,613	150,312	146,783
Other	24,883	27,759	28,905	29,207	27,620	28,360	28,279	27,890
Science and engineering	323,371	331,382	342,430	350,133	362,344	376,569	386,384	388,995
Fellowships	33,231	33,345	34,430	35,158	35,625	36,158	37,260	39,059
Research assistantships	105,136	105,604	106,018	107,360	109,825	112,936	115,028	114,109
Teaching assistantships	68,588	70,003	71,459	73,762	77,384	76,589	77,631	78,679
Traineeships	9,873	9,724	9,249	9,558	9,882	9,930	9,790	10,447
Other types of support	106,543	112,706	121,274	124,295	129,628	140,956	146,675	146,701
Self-support	87,754	92,023	99,950	102,651	108,688	118,059	123,298	123,016
Other	18,789	20,683	21,324	21,644	20,940	22,897	23,377	23,685
Science	241,130	246,248	252,596	259,222	267,267	275,074	279,950	283,914
Fellowships	26,013	26,194	26,612	27,290	27,651	28,013	28,508	30,174
Research assistantships	70,503	70,556	71,015	72,020	72,654	73,186	73,986	73,931
Teaching assistantships	56,844	57,960	59,063	61,252	64,103	63,655	64,407	65,440
Traineeships	8,856	8,732	8,328	8,637	9,003	9,041	8,927	9,515
Other types of support	78,914	82,806	87,578	90,023	93,856	101,179	104,122	104,854
Self-support	65,677	68,102	72,492	74,680	78,630	84,219	86,860	87,483
Other	13,237	14,704	15,086	15,343	15,226	16,960	17,262	17,371
Agricultural sciences	9,185	8,977	9,103	9,276	9,564	10,246	10,505	10,889
Fellowships	656	555	654	678	691	719	712	795
Research assistantships	5,473	5,319	5,383	5,544	5,528	5,492	5,633	5,763
Teaching assistantships	1,148	1,163	1,172	1,188	1,295	1,353	1,415	1,464
Traineeships	20	50	33	33	25	31	43	59
Other types of support	1,888	1,890	1,861	1,833	2,025	2,651	2,702	2,808
Self-support	1,523	1,439	1,474	1,425	1,579	2,147	2,218	2,279
Other	365	451	387	408	446	504	484	529
Biological sciences	55,836	57,082	58,011	58,327	58,501	59,235	60,028	59,764
Fellowships	7,053	6,760	6,618	6,651	6,743	6,497	6,735	6,856
Research assistantships	24,349	24,783	24,682	24,448	23,890	23,735	24,149	23,633
Teaching assistantships	8,712	9,022	9,349	9,359	9,215	9,231	9,248	9,502
Traineeships	5,710	5,510	5,581	5,615	5,889	5,890	5,562	5,699
Other types of support	10,012	11,007	11,781	12,254	12,764	13,882	14,334	14,074
Self-support	7,170	7,650	8,535	9,046	9,595	10,134	10,704	10,682
Other	2,842	3,357	3,246	3,208	3,169	3,748	3,630	3,392
Communication <sup>a</sup>	ne	ne	ne	4,049	4,642	5,429	5,588	6,053
Fellowships	ne	ne	ne	170	216	292	280	315
Research assistantships	ne	ne	ne	549	588	582	485	678
Teaching assistantships	ne	ne	ne	1,698	2,034	2,111	2,247	2,294
Traineeships	ne	ne	ne	25	12	19	27	25
Other types of support	ne	ne	ne	1,607	1,792	2,425	2,549	2,741
Self-support	ne	ne	ne	1,421	1,523	2,088	2,266	2,361
Other	ne	ne	ne	186	269	337	283	380
Computer sciences	26,524	26,937	28,285	27,874	28,850	29,669	30,080	30,407
Fellowships	1,449	1,463	1,472	1,456	1,672	1,882	1,501	1,651
Research assistantships	7,053	7,084	7,155	6,921	7,225	7,454	7,760	7,787
Teaching assistantships	4,506	4,374	4,484	4,446	4,696	4,563	4,446	4,354
Traineeships	230	181	157	157	148	167	188	186
Other types of support	13,286	13,835	15,017	14,894	15,109	15,603	16,185	16,429

TABLE 20. Full-time graduate students in science, engineering, and health in doctorate-granting institutions, by field and primary mechanism of support: 2005–11

Field and primary mechanism of support	2005	2006	2007old <sup>a</sup>	2007new <sup>a</sup>	2008	2009	2010	2011
Self-support	11,036	11,776	12,915	12,806	13,191	13,429	14,007	14,211
Other	2,250	2,059	2,102	2,088	1,918	2,174	2,178	2,218
Earth, atmospheric, and ocean sciences	10,999	11,102	10,973	10,570	10,874	11,211	11,868	11,973
Fellowships	1,355	1,300	1,267	1,179	1,275	1,259	1,293	1,384
Research assistantships	4,655	4,664	4,601	4,409	4,487	4,628	4,878	4,787
Teaching assistantships	2,560	2,704	2,625	2,568	2,728	2,674	2,696	2,706
Traineeships	111	106	70	74	79	67	77	68
Other types of support	2,318	2,328	2,410	2,340	2,305	2,583	2,924	3,028
Self-support	1,939	1,971	2,002	1,948	1,974	2,168	2,430	2,476
Other	379	357	408	392	331	415	494	552
Family and consumer sciences/human sciences <sup>a</sup>	ne	ne	ne	1,489	1,754	1,903	2,118	2,348
Fellowships	ne	ne	ne	90	117	133	143	132
Research assistantships	ne	ne	ne	334	385	434	407	429
Teaching assistantships	ne	ne	ne	429	517	464	585	655
Traineeships	ne	ne	ne	9	0	1	15	28
Other types of support	ne	ne	ne	627	735	871	968	1,104
Self-support	ne	ne	ne	577	602	759	808	915
Other	ne	ne	ne	50	133	112	160	189
Mathematical sciences	14,652	14,995	15,311	15,013	15,636	16,328	16,917	17,587
Fellowships	1,414	1,529	1,550	1,541	1,573	1,708	1,720	1,754
Research assistantships	1,847	1,765	1,841	1,784	1,821	1,931	1,981	2,053
Teaching assistantships	8,041	8,064	8,226	8,178	8,547	8,494	8,643	8,747
Traineeships	95	98	125	128	156	139	176	205
Other types of support	3,255	3,539	3,569	3,382	3,539	4,056	4,397	4,828
Self-support	2,626	2,888	3,042	2,859	3,016	3,478	3,825	4,180
Other	629	651	527	523	523	578	572	648
Multidisciplinary/interdisciplinary studies <sup>a</sup>	ne	ne	ne	2,076	2,818	3,420	4,482	3,790
Fellowships	ne	ne	ne	261	531	626	850	377
Research assistantships	ne	ne	ne	514	527	615	830	1,024
Teaching assistantships	ne	ne	ne	280	406	483	674	650
Traineeships	ne	ne	ne	39	46	45	56	82
Other types of support	ne	ne	ne	982	1,308	1,651	2,072	1,657
Self-support	ne	ne	ne	843	1,050	1,380	1,757	1,427
Other	ne	ne	ne	139	258	271	315	230
Neuroscience <sup>a</sup>	na	na	na	1,529	1,908	2,261	2,682	3,909
Fellowships	na	na	na	372	381	462	655	898
Research assistantships	na	na	na	634	832	955	997	1,473
Teaching assistantships	na	na	na	199	177	198	214	330
Traineeships	na	na	na	211	349	426	506	767
Other types of support	na	na	na	113	169	220	310	441
Self-support	na	na	na	68	96	84	150	220
Other	na	na	na	45	73	136	160	221
Physical sciences	31,921	32,368	32,548	32,327	32,747	33,671	34,280	35,056
Fellowships	2,760	3,073	3,119	3,106	2,862	2,895	3,314	3,585
Research assistantships	13,921	13,809	13,795	13,676	13,961	14,354	14,217	14,185
Teaching assistantships	12,455	12,449	12,489	12,474	12,939	12,788	12,951	13,181
Traineeships	420	436	417	415	390	432	395	414
Other types of support	2,365	2,601	2,728	2,656	2,595	3,202	3,403	3,691
Self-support	1,671	1,760	1,850	1,779	1,930	2,357	2,601	2,682
Other	694	841	878	877	665	845	802	1,009
Psychology <sup>b</sup>	32,781	32,944	34,801	34,286	35,866	34,585	33,566	33,496
Fellowships	2,443	2,543	2,307	2,252	2,130	2,027	2,062	2,093
Research assistantships	5,363	5,284	5,592	5,424	5,646	5,251	5,144	4,942
Teaching assistantships	5,944	6,259	6,276	6,171	6,381	6,348	6,236	6,162
Traineeships	1,035	1,032	929	920	913	1,042	1,004	885

TABLE 20. Full-time graduate students in science, engineering, and health in doctorate-granting institutions, by field and primary mechanism of support: 2005–11

Field and primary mechanism of support	2005	2006	2007old <sup>a</sup>	2007new <sup>a</sup>	2008	2009	2010	2011
Other types of support	17,996	17,826	19,697	19,519	20,796	19,917	19,120	19,414
Self-support	15,476	15,298	16,341	16,171	18,009	17,234	16,456	16,986
Other	2,520	2,528	3,356	3,348	2,787	2,683	2,664	2,428
Social sciences	59,232	61,843	63,564	62,406	64,107	67,116	67,836	68,642
Fellowships	8,883	8,971	9,625	9,534	9,460	9,513	9,243	10,334
Research assistantships	7,842	7,848	7,966	7,783	7,764	7,755	7,505	7,177
Teaching assistantships	13,478	13,925	14,442	14,262	15,168	14,948	15,052	15,395
Traineeships	1,235	1,319	1,016	1,011	996	782	878	1,097
Other types of support	27,794	29,780	30,515	29,816	30,719	34,118	35,158	34,639
Self-support	24,236	25,320	26,333	25,737	26,065	28,961	29,638	29,064
Other	3,558	4,460	4,182	4,079	4,654	5,157	5,520	5,575
Engineering	82,241	85,134	89,834	90,911	95,077	101,495	106,434	105,081
Fellowships	7,218	7,151	7,818	7,868	7,974	8,145	8,752	8,885
Research assistantships	34,633	35,048	35,003	35,340	37,171	39,750	41,042	40,178
Teaching assistantships	11,744	12,043	12,396	12,510	13,281	12,934	13,224	13,239
Traineeships	1,017	992	921	921	879	889	863	932
Other types of support	27,629	29,900	33,696	34,272	35,772	39,777	42,553	41,847
Self-support	22,077	23,921	27,458	27,971	30,058	33,840	36,438	35,533
Other	5,552	5,979	6,238	6,301	5,714	5,937	6,115	6,314
Aerospace engineering	3,150	3,291	3,379	3,379	3,588	3,845	4,187	4,200
Fellowships	260	302	386	386	334	319	363	428
Research assistantships	1,366	1,387	1,478	1,478	1,566	1,706	1,735	1,708
Teaching assistantships	441	459	502	502	517	488	472	488
Traineeships	35	40	33	33	34	36	31	42
Other types of support	1,048	1,103	980	980	1,137	1,296	1,586	1,534
Self-support	708	789	725	725	869	1,013	1,251	1,286
Other	340	314	255	255	268	283	335	248
Agricultural engineering	855	893	917	917	1,022	1,084	1,198	1,372
Fellowships	59	34	40	40	62	73	59	100
Research assistantships	578	604	628	628	751	751	775	798
Teaching assistantships	69	68	61	61	50	32	63	100
Traineeships	2	11	36	36	0	2	5	24
Other types of support	147	176	152	152	159	226	296	350
Self-support	99	119	95	95	122	172	257	296
Other	48	57	57	57	37	54	39	54
Architecture <sup>a</sup>	na	na	na	3,981	5,092	5,988	5,959	2,754
Fellowships	na	na	na	335	395	387	486	261
Research assistantships	na	na	na	330	306	330	372	246
Teaching assistantships	na	na	na	723	900	848	879	436
Traineeships	na	na	na	10	1	4	4	1
Other types of support	na	na	na	2,583	3,490	4,419	4,218	1,810
Self-support	na	na	na	2,225	2,933	3,626	3,480	1,409
Other	na	na	na	358	557	793	738	401
Biomedical engineering	5,232	5,641	5,885	5,908	6,260	6,840	7,375	7,847
Fellowships	778	812	815	819	938	1,014	1,102	1,218
Research assistantships	2,231	2,432	2,548	2,559	2,969	3,259	3,444	3,456
Teaching assistantships	458	480	518	518	535	527	554	586
Traineeships	336	360	361	361	347	382	427	493
Other types of support	1,429	1,557	1,643	1,651	1,471	1,658	1,848	2,094
Self-support	1,268	1,370	1,336	1,336	1,222	1,435	1,619	1,858
Other	161	187	307	315	249	223	229	236
Chemical engineering	6,110	6,185	6,249	6,433	6,722	7,058	7,472	7,594
Fellowships	648	677	772	814	864	834	860	987
Research assistantships	3,593	3,652	3,598	3,702	3,789	4,063	4,158	3,973
Teaching assistantships	757	742	765	810	835	841	816	853

TABLE 20. Full-time graduate students in science, engineering, and health in doctorate-granting institutions, by field and primary mechanism of support: 2005–11

Field and primary mechanism of support	2005	2006	2007old <sup>a</sup>	2007new <sup>a</sup>	2008	2009	2010	2011
Traineeships	123	114	72	69	78	90	90	73
Other types of support	989	1,000	1,042	1,038	1,156	1,230	1,548	1,708
Self-support	769	757	793	787	912	992	1,256	1,407
Other	220	243	249	251	244	238	292	301
Civil engineering <sup>a</sup>	12,958	12,836	14,352	11,063	11,619	13,120	13,719	13,898
Fellowships	1,094	1,035	1,235	931	938	950	1,056	1,049
Research assistantships	4,440	4,339	4,461	4,262	4,386	4,893	4,949	4,820
Teaching assistantships	1,984	2,129	2,283	1,604	1,825	1,774	1,922	2,009
Traineeships	159	148	158	148	175	103	32	43
Other types of support	5,281	5,185	6,215	4,118	4,295	5,400	5,760	5,977
Self-support	4,493	4,448	5,311	3,484	3,624	4,660	4,947	5,119
Other	788	737	904	634	671	740	813	858
Electrical engineering	25,002	26,259	27,522	27,646	27,813	27,792	28,605	29,600
Fellowships	1,558	1,520	1,769	1,767	1,666	1,604	1,620	1,767
Research assistantships	10,176	9,834	9,623	9,706	10,070	10,475	10,553	10,303
Teaching assistantships	3,822	3,806	3,805	3,831	3,927	3,793	3,634	3,855
Traineeships	140	90	48	48	54	43	73	50
Other types of support	9,306	11,009	12,277	12,294	12,096	11,877	12,725	13,625
Self-support	7,722	9,165	10,348	10,368	10,530	10,470	11,469	12,015
Other	1,584	1,844	1,929	1,926	1,566	1,407	1,256	1,610
Engineering science	1,589	1,639	1,437	1,402	1,444	1,450	1,478	1,545
Fellowships	306	298	233	224	194	164	175	169
Research assistantships	808	750	571	557	618	721	687	700
Teaching assistantships	173	189	183	176	118	133	155	249
Traineeships	20	29	23	23	19	7	14	7
Other types of support	282	373	427	422	495	425	447	420
Self-support	185	266	285	284	340	306	321	342
Other	97	107	142	138	155	119	126	78
Industrial engineering	5,822	6,171	6,727	7,109	7,852	7,878	7,829	7,737
Fellowships	417	413	347	419	420	430	395	403
Research assistantships	1,481	1,556	1,539	1,631	1,905	1,747	1,762	1,680
Teaching assistantships	899	952	968	996	1,063	1,000	960	989
Traineeships	51	54	62	62	51	45	64	49
Other types of support	2,974	3,196	3,811	4,001	4,413	4,656	4,648	4,616
Self-support	2,251	2,493	3,231	3,449	3,742	3,900	3,807	3,676
Other	723	703	580	552	671	756	841	940
Mechanical engineering	11,984	12,408	12,913	12,903	13,456	15,215	16,257	15,758
Fellowships	921	981	1,078	1,076	1,176	1,318	1,412	1,331
Research assistantships	5,308	5,610	5,586	5,582	5,525	6,220	6,685	6,346
Teaching assistantships	2,171	2,229	2,316	2,317	2,389	2,441	2,570	2,522
Traineeships	104	89	62	54	67	132	80	96
Other types of support	3,480	3,499	3,871	3,874	4,299	5,104	5,510	5,463
Self-support	2,895	2,849	3,268	3,270	3,595	4,351	4,648	4,487
Other	585	650	603	604	704	753	862	976
Metallurgical/materials engineering	4,491	4,606	4,647	4,593	4,784	5,166	5,519	5,839
Fellowships	652	547	565	532	487	498	546	606
Research assistantships	2,764	2,847	2,814	2,829	2,996	3,119	3,298	3,396
Teaching assistantships	408	455	496	451	416	438	443	450
Traineeships	23	28	29	32	37	31	23	33
Other types of support	644	729	743	749	848	1,080	1,209	1,354
Self-support	525	582	578	586	638	878	1,041	1,174
Other	119	147	165	163	210	202	168	180
Mining engineering	200	177	199	132	201	205	353	412
Fellowships	13	7	16	16	7	8	20	13
Research assistantships	94	62	86	74	112	108	178	221

TABLE 20. Full-time graduate students in science, engineering, and health in doctorate-granting institutions, by field and primary mechanism of support: 2005–11

Field and primary mechanism of support	2005	2006	2007old <sup>a</sup>	2007new <sup>a</sup>	2008	2009	2010	2011
Teaching assistantships	19	30	26	20	35	32	44	39
Traineeships	0	0	0	0	0	0	0	0
Other types of support	74	78	71	22	47	57	111	139
Self-support	47	50	56	19	40	42	105	123
Other	27	28	15	3	7	15	6	16
Nuclear engineering	840	910	960	951	941	968	1,123	1,165
Fellowships	122	141	142	142	141	158	187	194
Research assistantships	447	470	480	472	476	499	593	591
Teaching assistantships	62	62	85	85	76	89	92	99
Traineeships	7	6	8	8	12	9	13	14
Other types of support	202	231	245	244	236	213	238	267
Self-support	126	133	143	142	134	133	149	151
Other	76	98	102	102	102	80	89	116
Petroleum engineering	629	642	786	786	822	988	1,058	1,057
Fellowships	81	60	55	55	27	55	53	62
Research assistantships	302	314	410	410	435	524	550	534
Teaching assistantships	63	85	80	80	124	118	118	144
Traineeships	3	3	5	5	0	0	0	0
Other types of support	180	180	236	236	236	291	337	317
Self-support	130	127	164	164	187	216	266	238
Other	50	53	72	72	49	75	71	79
Engineering, nec	3,379	3,476	3,861	3,708	3,461	3,898	4,302	4,303
Fellowships	309	324	365	312	325	333	418	297
Research assistantships	1,045	1,191	1,181	1,120	1,267	1,335	1,303	1,406
Teaching assistantships	418	357	308	336	471	380	502	420
Traineeships	14	20	24	32	4	5	7	7
Other types of support	1,593	1,584	1,983	1,908	1,394	1,845	2,072	2,173
Self-support	859	773	1,125	1,037	1,170	1,646	1,822	1,952
Other	734	811	858	871	224	199	250	221
Health <sup>a,b</sup>	57,827	61,756	61,292	59,288	59,943	52,287	46,868	41,628
Fellowships	2,795	2,987	3,432	2,991	2,738	2,611	2,459	2,087
Research assistantships	7,231	7,221	7,235	6,707	6,485	6,457	6,497	6,158
Teaching assistantships	3,891	4,201	4,579	4,318	4,015	3,439	3,523	3,435
Traineeships	4,344	4,553	3,874	3,622	3,093	2,763	2,473	1,976
Other types of support	39,566	42,794	42,172	41,650	43,612	37,017	31,916	27,972
Self-support	33,472	35,718	34,591	34,087	36,932	31,554	27,014	23,767
Other	6,094	7,076	7,581	7,563	6,680	5,463	4,902	4,205

na = not applicable; data were not collected at this level of detail. ne = not eligible; data were not collected for this field prior to 2007.

nec = not elsewhere classified.

<sup>a</sup> In 2007, eligible fields were reclassified, newly eligible fields were added, and survey was redesigned to improve coverage and coding of eligible units. "2007new" presents data as collected in 2007; "2007old" shows data as they would have been collected in prior years. Science fields "communication" and "family and consumer sciences/human sciences" are newly eligible; data for these two fields are only in 2007new. Science field "multidisciplinary/interdisciplinary studies" is also newly eligible; data may have been reported under other fields before 2007. "Neuroscience" is reported as a separate field of science in 2007new; data were reported under health field "neurology" in 2007old and previous years. "Architecture" is reported as a separate field of engineering in 2007new; data were reported under "civil engineering" in 2007old and previous years. See appendix A in <http://www.nsf.gov/statistics/nsf10307/> for more detail.

<sup>b</sup> Beginning with 2008, more rigorous follow-up was done with institutions regarding exclusion of practitioner-oriented graduate degree programs in psychology and in other health (a subfield of health). This change may affect interpretation of trends in these fields.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics, NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering.